ACCREDITED
CERT #0955.01

TIMCO ENGINEERING, Inc.
An IIA Company

Test Report - FCC Part 1.1310/ MPE
Applicant: Fiplex Communications Inc

Approved for Release By:

Signature: Bruno Clavier

Name & Title: Bruno Clavier, General Manager

Date of Signature 11/17/2023

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1. Applicant Information

Applicant: Fiplex Communications Inc.
Address: 2101 NW 79th Avenue
Miami, Florida, 33122, United States

2. Location of Testing

2.1 Test Laboratory

Timco Engineering Inc. is a subsidiary of Industrial Inspection & Analysis, Inc. ("IIA"). Testing was performed at IIA's permanent laboratory located at 13146 NW 86th Drive, Suite 400, Alachua, Florida 32615.

FCC test firm # 578780
FCC Designation # US1070
FCC site registration is under A2LA certificate # 0955.01
ISED Canada test site registration # 2056A
EU Notified Body # 1177
For all designations see A2LA scope # 0955.01

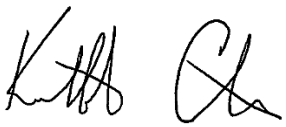
2.2 Testing was performed, reviewed by

Dates of Testing: 10/15/2023 – 11/1/2023

Signature:  Sr. EMC Engineer EMC-003838-NE

Name & Title: Tim Royer, EMC Engineer

Date of Signature 12/15/2023

Signature: 

Name & Title: Kristoffer Costa, EMC Technician

Date of Signature 12/15/2023

3. Test Sample(s) (EUT/DUT)

The test sample was received: 9/29/2023

3.1 Description of the EUT

A description as well as unambiguous identification of the EUT(s) tested. Where more than one sample is required for technical reasons (such as the use of connected units for the purpose of conducted output power testing where the product units will have integral antennas), each specific test shall identify which unit was tested.

Identification	
FCC ID:	P3TDH440-HG-SCH
Brief Description	UHF Single Carrier Amplifier (SCA) Class A
Model(s) #	DH440
Firmware version	N/A
Software version	V1.5
Serial Number	N/A

Technical Characteristics	
Frequency Range	453 MHz- 512 MHz
RF O/P Power (Max.)	38.35 dBm/ 6.83W
Modulation	FM
Bandwidth & Emission Class	4K04F3E, 7K86F3E, 12K3F3E, 8K06F1D, 8K06F1E, 8K02F1W, 9K63F1D, 9K63F1E, 9K63D7W
Number of Channels	N/A
Duty Cycle	100%
Antenna Connector	N Type
Voltage Rating (AC or Batt.)	110 VAC

Antenna Characteristics			
Antenna	Frequency Range	Mode / BW	Antenna Gain
1	n/a	n/a	0 dBi

- Note: Information such as antenna gain, firmware/software numbers are provided by manufacturer and cannot be validated by the test lab.

4. Test methods & Applicable Regulatory Limits

4.1 Test methods/Standards/Guidance:

The following guidance FCC KDB 447498 D01 General RF Exposure Guidance v06 was used for RF exposure evaluation as per FCC Part 1.1310 and FCC Part 2.1091 and part 2.1093. Full test results are available in this report.

4.1.1 FCC Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging Time (minutes)
A Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*($900/f^2$)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
B Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*($180/f^2$)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

4.2 Equations

POWER DENSITY

E(V/m) = SQRT (30 * P * G) / d

Pd(W/m^2) = E^2 / 377

S = EIRP / (4 * Pi * D^2v)

Where:

S = Power density, in mW/cm^2
EIRP = Equivalent Isotropic Radiated Power, in mW
D = Separation distance in cm

Power density is converted from units of mW/cm^2 to units of W/m^2 by multiplying by 10.

DISTANCE

D = SQRT (EIRP / (4 * Pi * S))

Where:

D = Separation distance in cm
EIRP = Equivalent Isotropic Radiated Power, in mW
S = Power density in mW/cm^2

SOURCE-BASED DUTY CYCLE (When applicable (for example, multi-slot mobile phone applications) A duty cycle factor may be applied.)

Source-based time-average EIRP = (DC / 100) * EIRP

Where:

DC = Duty Cycle in % as applicable.
EIRP = Equivalent Isotropic radiated Power, in mW

5. RF Exposure Results

MPE

Frequency Band	Evaluation Distance (cm)	Max Power + Tolerance (dBm)	Antenna Gain (dBi)	Duty Cycle (%)	EIRP (W)	Power Density	Limit for Uncontrolled Exposure	Limit for Controlled Exposure	Distance Required to meet Uncontrolled Exposure Limt (cm)
453-512 MHz	20	43.00	0.00	100%	19.95	3.969 mW/cm2	0.3 mW/cm2	1.71 mW/cm2	72.75

RESULT: Pass at DISTANCE 72.75 cm

6. History of Test Report Changes

Test Report #	Revision #	Description	Date of Issue
TR_10339-23_FCC 1.1310/ MPE_	1	Initial release	11/7/2023
	2	Updated page 8	12/12/2023

END OF TEST REPORT